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EXAMINER

METZMAIER, DANIEL S

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

03/19/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

department-gso.patent@syngenta.com

Office Action Summary

Application No.

10/553,914

Applicant(s)

FORMSTONE ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8-11,14-16 and 18-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8-11,14-16 and 18-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1, 4-6, 8-11, 14-16 and 18-27 are pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

2. The combined oath / declaration filed 21 December 2006 and filed 04 January 2010 are acceptable.

Specification

3. Applicant is reminded of the proper content of an Abstract of the Disclosure.

In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, *e.g.*, "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

Complete revision of the content of the abstract is required on a separate sheet.

The Invention includes embodiments and utilities that should be listed, *e.g.*, an example of organic solvent, and the compositions that the antifoams, *e.g.*, polyalkylsilicones and hydrophobic silica, are incorporated, *e.g.*, agrochemicals. The abstract of the disclosure should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 1, 4-6 and 8 have been amended in the preamble to set forth an "aqueous concentrate comprising" the components set forth in the claims. Claims 21 and 22 also set forth "aqueous concentrate composition comprising". None of the herein above claims set forth concentrations. The specification sets forth (page 1, lines 6-8): "A typical application is in respect of aqueous agrochemical formulations supplied as concentrates and intended to be diluted prior to application." It is noted that not all the claims are directed to agrochemical compositions. "Concentrate" as claimed has been given little patentable weight and is interpreted as aqueous compositions, which can be diluted prior to their intended application. "During patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.' >The Federal Circuit's en banc decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005)". See MPEP 2111

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, 6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Feldmann et al, US 3,210,248. Attention is directed to example 14, which employs antifoam AF emulsion in a topical cream having 30 parts/100 total parts of isopropyl myristate. Antifoam AF is characterized therein as a " . . . water dilutable dispersion of

30 % Antifoam A, an organosilicone oxide polymer, obtainable from Dow-corning Corp. Midland, Mich.", *i.e.*, silicone polymer.

Regarding solubility limitation of the antifoam in solvent, the Antifoam A disclosed in Feldmann et al would have been inherently soluble in the isopropyl myristate at least at 10 % by weight at a temperature in the range of 15 - 20° C. Regarding claims 6 and 8, isopropyl myristate has a flash point of about 164° C (closed cup).

7. Claims 1,4, 6, 9-11, 14, 16, 19, 21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al, US PGPUB 2003/0072776. Sun et al (abstract, examples and claims) disclose emulsifiable concentrate (EC) compositions with silicone antifoams.

Sun et al (paragraph [0079]) discloses the emulsifiable concentrates may be diluted with water to the desired solids content and the concentration of the actives in the final formulation of about 1 to about 95 weight %. The amount of antifoam in the EC formulation is present to deliver about 1 to 200 ppm to the spray mixture upon dilution and use.

Sun et al exemplified the use of Aromatic 100 and aromatic 150. Aromatic 100 inherently has a flash point of ~ 41° C, which is greater than 40 °C as claimed (Instant claim 6). Aromatic 150 inherently has a flash point of ~ 66° C, which is greater than 40 °C as claimed (Instant claim 6). Sun et al (paragraph [0073]) discloses offsetting considerations of the concentrates are the solubility of the active(s) and chemical and toxicology profiles. The solubility of the of the active antifoam would have been

expected to the Sun et al compositions since it active(s) solubility is specifically mentioned and desired.

The Sun et al compositions contain water and phosphate esters, which would inherently function as bioperformance enhancing agents.

8. Claims 1, 4-6, 9-11, 14-16 and 19-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Atkinson et al, US 6,162,764.

Atkinson et al (abstract; examples @ columns 3-5, lines 65-50; and claims) teach a stable premixture composition which remains soluble or emulsifiable prior to mixing with pesticides includes an aliphatic solvent, an emulsifier, a phosphate ester, water conditioner and/or a polyacrylate dispersant, an antifoam agent, and a polyacrylamide drift reduction agent.

Atkinson et al (columns 3-5, lines 65-50; particularly columns 3-4, lines 65-21) discloses compositions that are pre-emulsified and mixed with an aqueous agrichemical composition. Atkinson et al (column 5, lines 31-35) discloses antifoams. Said antifoams inherently include those having hydrophobic silica. The solubility of the antifoam in solvent, flash point of the solvent and density properties for the antifoam compositions would have been inherent to the Atkinson et al compositions. The phosphate ester and/or amine emulsifiers read on the claimed bioperformance enhancing agents.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 5 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al, US PGPUB 2003/0072776. Sun et al (abstract, examples and claims) disclose emulsifiable concentrate compositions with silicone antifoams.

Sun et al (paragraph [0079]) discloses the emulsifiable concentrates may be diluted with water to the desired solids content and the concentration of the actives in the final formulation of about 1 to about 95 weight %. The amount of antifoam in the EC formulation is present to deliver about 1 to 200 ppm to the spray mixture upon dilution and use.

Sun et al exemplified the use of Aromatic 100 and aromatic 150. Aromatic 100 inherently has a flash point of ~ 41° C, which is greater than 40 °C as claimed (Instant claim 6). Aromatic 150 inherently has a flash point of ~ 66° C, which is greater than 40 °C as claimed (Instant claim 6).

Sun et al differs from the claims in the sufficiency of the disclosure of the solubility of the antifoam agent and/or the exemplified incorporation of hydrophobic silica into the exemplified compositions (instant claims 5 and 15), the sufficiency of the disclosure and/or the exemplified use of esters as the solvent (instant claims 7 and 17), or the order of adding other ingredients in the methods (instant claims 24-27).

Sun et al (paragraph [0073]) discloses offsetting considerations of the concentrates are the solubility of the active(s) and chemical and toxicology profiles. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to vary the solvent having advantageous solubility for the active antifoam of the Sun et al compositions, wherein the active(s) solubility is specifically mentioned and desired in the Sun et al reference.

Sun et al (paragraph [0077]) discloses other additives may optionally be incorporated into the formulations including hydrophobic filler, such as silica. The use of hydrophobic silica is notoriously well known to be incorporated into silicone antifoam compositions.

Sun et al (paragraph [0073]) discloses the solvents employed in the emulsifiable concentrates including fatty acid esters that read on the compounds claimed in claims.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hydrophobic silica as the disclosed optional additive as taught in the Sun et al reference for the hydrophobic silicas' antifoaming efficacy. It would have also been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ esters of fatty acids as taught and further suggested in

the Sun et al reference for the advantage of the particular desired end use of the antifoam composition.

To the extent that the order of adding other ingredients in the methods of Sun et al differs from the instant claims (claims 24-27), the "(selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930)". See MPEP 2144.04(IV)(C) and case law cited therein.

12. Claims 1, 5-6, 8-9, 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al, US PGPUB 2003/0072776, as applied to claims 1-, 4-6, 8-11, 14, 16, 19, 21, and 23-27 above, and further in view of Pirson et al, 4,338,217.

Sun et al, US PGPUB 2003/0072776. Sun et al (abstract, examples and claims) disclose emulsifiable concentrate compositions with silicone antifoams as set forth in the above anticipation and obviousness rejections.

Sun et al differs from the claims in the sufficiency of the disclosure and/or the exemplified incorporation of hydrophobic silica into the exemplified compositions (instant claims 5 and 15) or the sufficiency of the disclosure and/or the exemplified use of esters as the solvent including isopropyl myristate (instant claims 6-8 and 16-18).

Sun et al (paragraph [0010] et seq and claims) discloses alkyl (alkoxyether) silicone antifoams and discloses silica as an optional ingredient.

Sun et al (paragraph [0073]) discloses the solvents employed in the emulsifiable concentrates including fatty acid esters that read on the compounds claimed but differ from claims 8 and 18 in the specific alkyl ester with specific fatty acid.

Pirson et al (abstract and claims) disclose antifoams comprising alkyl (alkoxyether) silicone and (column 2, lines 10-21 and 35-37) hydrophobic silica as pyrogenic silica or silica treated with trimethoxysilanes.

The Pirson et al (column 4, lines 3 et seq) antifoam compositions having related alkyl (alkoxyether) silicones are furthermore closely related to the Sun et al antifoam compositions. The Pirson et al antifoams may further be combined with emulsifiers and/or protective colloids to aid in the dispersibility of the antifoams at the point of application, *i.e.*, aqueous systems (column 1, lines 4-7).

Pirson et al (column 3, lines 48 et seq; particularly lines 63-64) disclose the antifoams comprising (alkoxyether) silicone and hydrophobic silica may further contain liquids other than the organopolysiloxanes (alkyl (alkoxyether) silicones) including esters of carboxylic acids and monovalent alcohols, such as isopropyl myristate, as additives known in the art in preparing antifoams.

These references are combinable because they teach related emulsifiable compositions comprising related antifoam compositions and common additives therefore. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hydrophobic silica and isopropyl myristate in the compositions of the Sun et al reference as art recognized additives in preparing compositions comprising antifoams for their advantageous antifoaming efficacy.

13. Claims 1, 4-6, 9-11, 14-16 and 19-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al, US 6,403,163.

Fisher et al (abstract) teach compositions for rendering surfaces water repellent formed by combining water or a solvent, a methylhydrogensiloxane polymer or copolymer, an alkoxysilane, and a silicone resin. The composition can also contain other components such as a volatile methyl siloxane, a surfactant, a catalyst, a mildewcide, etc.

Fisher et al (column 1, lines 1 et seq) discloses a number of aqueous composition components that read on the claimed solvent including but not limited to volatile methyl siloxane and ethylene glycol as a freeze-thaw additive.

Fisher et al differs from the claims in the sufficiency of the disclosure and/or the exemplified incorporation of the first (hydrophobic silica), third (microbiocides), fourth (silicone antifoams) and/or fifth (mildewicides including algicides, antimicrobials, bactericides, or fungicides) optional additives into the exemplified compositions.

Fisher et al (column 6, lines 7 et sq) discloses optional additives including as the first optional additive the incorporation of hydrophobic silica; as the third optional additive (column 6, lines 25 et seq) the incorporation of microbiocides; as the fourth optional additive (column 6, lines 34 et seq) the incorporation of silicone antifoams, such as silica filled polydimethylsiloxane; as the fifth optional additive (column 6, lines 41 et seq) mildewicides including algicides, antimicrobials, bactericides, disinfectants, and fungicides.

Fisher et al (column 7, lines 33 et seq) discloses the compositions may be made by merely mixing the ingredients together in the form of an emulsion by: (i) making an emulsion of several ingredients, (ii) making several emulsions containing one or more

ingredients, and combining the several emulsions, and (iii) following the procedure of (i) and (ii) and then adding some ingredients directly to water.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to incorporate the optional additives as specifically taught in the Fisher et al reference for their advantageous art taught and recognized functions.

The solubility of the antifoam in solvent, flash point of the solvent and density properties for the antifoam compositions would have been obvious to those with ordinary skill in the art at the time of the invention for the advantage of stability, homogeneity and safety. The phosphate ester and/or amine emulsifiers read on the claimed bioperformance enhancing agents.

Response to Arguments

14. Applicant's arguments filed 04 January 2010 have been fully considered but they are not persuasive.

15. Applicants comments regarding the abstract are correct but the abstract is not deemed to be in accordance with accepted Office chemical practice for abstracts and should be revised.

16. Applicants (page 7, response) assert the Feldman et al reference sets forth antifoams among other ingredients and applicants have mitigated problems of separation as characterized in their specification. This has not been deemed persuasive since the claims rejected by Feldman et al are deemed anticipated. Applicants arguments are not commensurate in scope with the claims regarding any alleged separation.

17. Applicants (page 7) assert Sun et al fails to recognize the importance of the criticality of solutions and/or selection of antifoams and organic solvents. This has not been deemed persuasive since Sun et al clearly recognizes said criticality. Sun et al (paragraph [0073]) discloses offsetting considerations of the concentrates are the solubility of the active(s) and chemical and toxicology profiles.

18. Applicants (pages 7 and 8) assert Atkinson et al is concerned with stable concentrates of pesticides rather than stable concentrates of antifoams. It is reasonable to conclude that a stable premix as taught in the Atkinson et al reference would include components other than just the pesticide since Atkinson et al is concerned with stability and determines stability of any separation.

Furthermore, the claims do not define any concentrations and do not limit the concentrates to concentrates of antifoams, the claimed concentrates do not specify a concentration for the antifoam and the claims do not distinguish the claims based on a quantifiable stability. Applicants' arguments are not commensurate in scope with the claims sought for patentability.

19. Applicants (page 8) assert the Sun et al reference only exemplifies aromatic solvents. Sun et al (paragraph [0073]) discloses offsetting considerations of the concentrates are the solubility of the active(s) and chemical and toxicology profiles. Ester solvents are well known in the agrochemical art as having a lower toxicology profile than the aromatic solvents and would have been known to those having ordinary skill in the art at the time of applicants' invention.

20. Applicants (pages 8 and 9) assert the Person et al reference does not provide the deficiencies of the Sun et al reference. Applicants assert Person et al fails to provide motivation for employing the ester solvents. This has not been persuasive since Person et al clearly teaches application of the antifoams to aqueous media and the advantageous dispersing and/or emulsifying properties of the esters, *i.e.*, polar solvents with an HLB relative to the aromatic solvents of the Sun et al reference.

21. Applicants (page 9) assert the Fisher et al reference does not disclose the solubility of the siloxanes in the aliphatic solvents for aqueous agrochemical compositions. Applicants arguments are not agreed since the Fisher et al reference (column 2, lines 33-40, among other citations therein) include therein the formation of emulsions and emulsifiable antifoam agents.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WO 03/065803 A2 is considered cumulative to the above rejections and qualifies as prior art under 35 U.S.C. 102(a).

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Daniel S. Metzmaier/
Primary Examiner, Art Unit 1796**

DSM